



INSTRUCTIONS

-J04558

REV. 2008-07-17

XR 1200 BRAIDED STAINLESS STEEL REAR BRAKE LINE KIT

GENERAL

Kit Number

45868-08

Models

This kit fits 2008 and later XR 1200 Sportster® models.

Tools and Supplies Required

Loctite® 243 Threadlocker and Sealant - Blue (H-D Part Number 99642-97) **AND** Loctite 565 Thread Sealant (H-D Part Number 99818-97) are BOTH required for the proper installation of this kit.

Fresh, uncontaminated DOT 4 brake fluid from a sealed container will also be needed.

NOTE

The brake system on this vehicle uses DOT 4 BRAKE FLUID. Do not mix grades of brake fluid as they are not compatible.

WARNING

Brakes are a critical safety component. Contact a Harley-Davidson dealer for brake repair or replacement. Improperly serviced brakes can adversely affect brake performance, which could result in death or serious injury. (00054a)

WARNING

The rider's safety depends upon the correct installation of this kit. Use the appropriate service manual procedures. If the procedure is not within your capabilities or you do not have the correct tools, have a Harley-Davidson dealer perform the installation. Improper installation of this kit could result in death or serious injury. (00333a)

NOTE

This instruction sheet references service manual information. A service manual for this model motorcycle is required for this installation and is available from a Harley-Davidson dealer.

Kit Contents

See Figure 6 and Table 1.

INSTALLATION

Preparation

WARNING

To prevent accidental vehicle start-up, which could cause death or serious injury, remove main fuse before proceeding. (00251b)

1. Refer to the service manual and follow the instructions given to remove the main fuse.

CAUTION

Direct contact of D.O.T. 4 brake fluid with eyes can cause irritation. Avoid eye contact. In case of eye contact flush with large amounts of water and get medical attention. Swallowing large amounts of D.O.T. 4 brake fluid can cause digestive discomfort. If swallowed, obtain medical attention. Use in well ventilated area. KEEP OUT OF REACH OF CHILDREN. (00240a)

CAUTION

D.O.T. 4 brake fluid will damage painted and body panel surfaces it comes in contact with. Always use caution and protect surfaces from spills whenever brake work is performed. Failure to comply can result in cosmetic damage. (00239b)

NOTE

Immediately wipe up any brake fluid spillage with a clean, dry, soft cloth. Follow up by thoroughly wiping affected area with a clean, damp, soft cloth (small spills) or washing with a large quantity of soapy water (large spills).

2. Drain the brake fluid from the rear brake reservoir and line per the instructions in the service manual.

Original Rear Brake Line Removal

NOTE

It may be necessary to remove components in order to access the rear brake line bracket mounting screws beneath the vehicle.

Models EXCEPT California: Disarm the security system, if so equipped. Refer to the service manual. While the system is disarmed, unplug the siren harness connector and remove the security siren, bracket and cover assembly from the vehicle.

California models: Remove the charcoal canister from the vehicle. Refer to the service manual.

ALL models: Tie the siren or canister to the rear fork with a bungee cord or other suitable restraint.

CAUTION

Remove brake line components carefully. Damage to seating surfaces can cause leakage. (00320a)

3. Carefully make note of the brake line routing and orientation of the banjo fittings.

See Figure 1. Disconnect the rear brake line assembly (1) from the rear brake master cylinder (2) and rear brake

caliper (3). Save the master cylinder and caliper banjo bolts (4). **Discard** all the sealing washers (5).

NOTE

This kit contains all sealing washers needed for replacement.

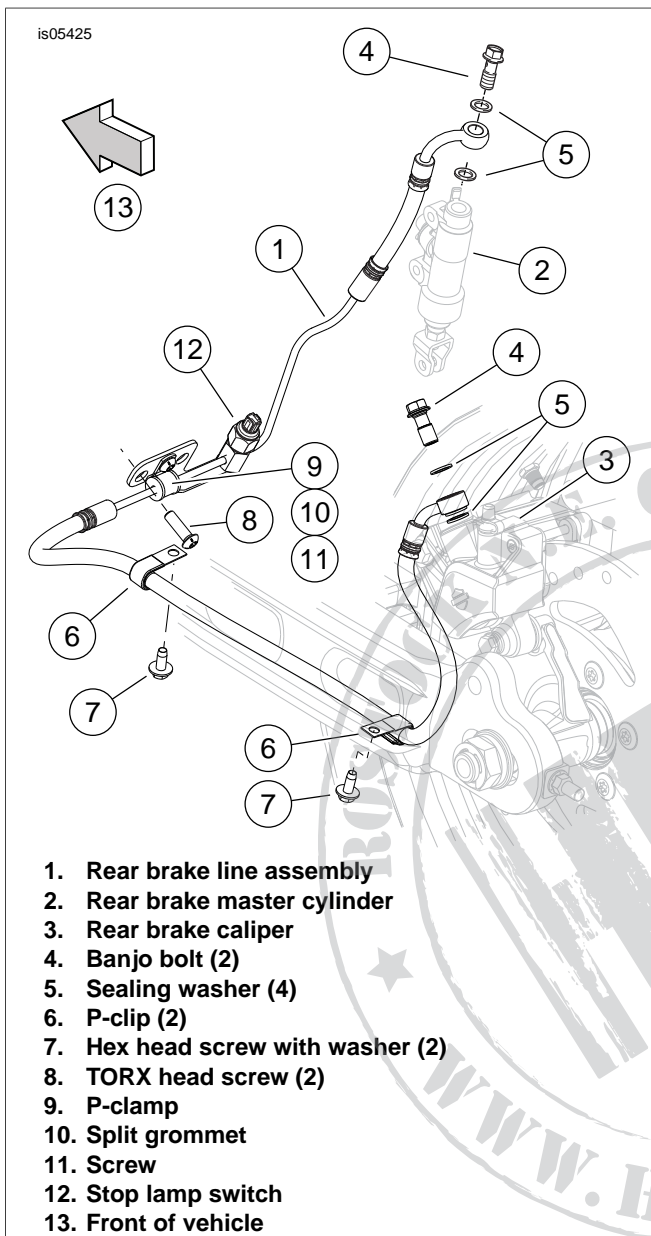


Figure 1. Original Rear Brake Line Assembly

NOTE

Note the orientation of the P-clips under the rear fork. The rear clip is oriented to the inside, and the front clip is oriented to the outside.

4. Remove the two hex head screws with washers (7) retaining the brake line P-clips (6) to the underside of the rear fork on the left side of the vehicle. Retain the screws, but discard the clips.
5. Remove the two T-40 TORX® head screws retaining the siren/canister mounting bracket and brake line bracket to the frame bosses.
6. Disconnect the wiring harness connectors [121] from the brake light switch spade terminals while removing the siren/canister bracket and rear brake line from the vehicle.

Remove and retain the screw (11) holding the brake line P-clamp (9) to the bracket. Disassemble the P-clamp and split grommet (10) from the brake line and set aside for use with the **new** brake line.

NOTE

Place a suitable container under the stop lamp switch to catch any residual brake fluid.

7. Unscrew the stop lamp switch from the original brake line. Discard the brake line, but retain the switch.

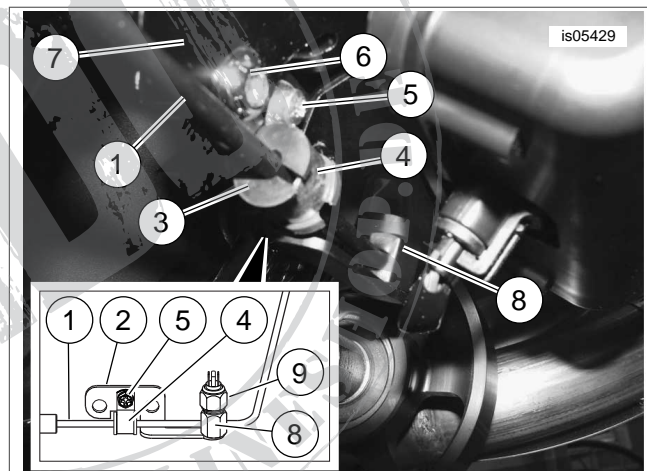
Braided Rear Brake Line Installation

NOTE

*Before installing the stop lamp switch into the **new** braided brake line manifold, refer to REPAIR AND REPLACEMENT PROCEDURES in the service manual. Follow the instructions under THREADLOCKING AGENTS to clean the switch and manifold pipe threads and apply Loctite® PST 565 Thread Sealant (H-D Part Number 99818-97) to the threads.*

To prevent brake fluid contamination, be careful not to allow excess sealant to seep into the manifold (do not apply thread sealant too close to the end of the thread).

8. See Figure 2. Install the original rear stop lamp switch (9) into the threaded hole in the manifold (8) of the braided brake line. Tighten the switch to 12-15 ft-lbs (16.3-20.3 Nm).



1. Brake line hard tube
2. Brake line bracket
3. Split grommet
4. P-clamp
5. Machine screw
6. TORX screw (2)
7. Siren/canister bracket
8. Stop lamp switch manifold
9. Stop lamp switch

Figure 2. Rear Brake Line Bracket Installation

9. Place the split grommet (3) removed earlier around the hard tube (1) portion of the braided brake line, centered between the brake line bracket (2) mounting holes.

NOTE

The P-clamp (4) should be oriented so the flat portion lies flat on the brake line bracket. Align the P-clamp holes with the tapped hole in the bracket. It may be necessary to use an awl or small Phillips screwdriver to align the holes.

10. Open up the P-clamp and wrap it around the grommet. Insert the machine screw (5), and secure the P-clamp and grommet to the brake line bracket.
11. Position the braided brake line assembly beneath the leading edge of the rear fork, with the short end toward the right side of the vehicle. From the right side, carefully guide the brake line end between the lower run of the drive belt and the rear fork, and up to the rear brake master cylinder.

WARNING

Replace brake line gaskets. Re-using original gaskets can cause brake failure and loss of vehicle control, which could result in death or serious injury. (00318a)

CAUTION

Avoid leakage. Be sure gaskets, banjo bolt(s) and brake line are clean and undamaged before assembly. (00323a)

NOTE

Make sure the banjo fittings on the braided brake line are oriented the same as the fittings on the original line.

12. See Figure 6. Install the brake line banjo fitting to the master cylinder, using a sealing washer (3) from the kit on each side of the fitting. Insert one of the banjo bolts (F) saved earlier through the washers and fitting. Thread the bolt into the master cylinder, but do not fully tighten at this time.
13. Refer to REPAIR AND REPLACEMENT PROCEDURES in the service manual for instructions on re-use of fasteners with THREADLOCKING AGENTS.
Obtain the two T-40 TORX screws (G) removed in step 5. Apply a few drops of Loctite 243 - Blue Threadlocker and Sealant to the **clean** screw threads.
14. Position the brake line bracket **behind** the siren/canister bracket (Figure 2, item 7), lining up the holes. Align the bracket holes to the frame bosses, and fasten the brackets to the frame, with the brake line bracket (A) sandwiched between the siren/canister bracket and the frame bosses. Tighten to 17-22 ft-lbs (23.1-29.9 Nm).
15. Run the long end of the braided brake line along the same route as the original brake line, beneath the left-side of the rear fork and up to the rear brake caliper.

At the caliper, position a **new** sealing washer (3) from the kit on each side of the brake line banjo fitting. Insert the remaining banjo bolt (F, saved earlier) through the washers and fitting. Thread the bolt into the caliper, but do not fully tighten at this time.

NOTE

The master cylinder housing and brake caliper housing (see Figure 3) each have a positive stop for the banjo fitting. When tightening the banjo bolt into the master cylinder and brake caliper housing in the next step, rotate the banjo fitting clockwise until it contacts the positive stop.

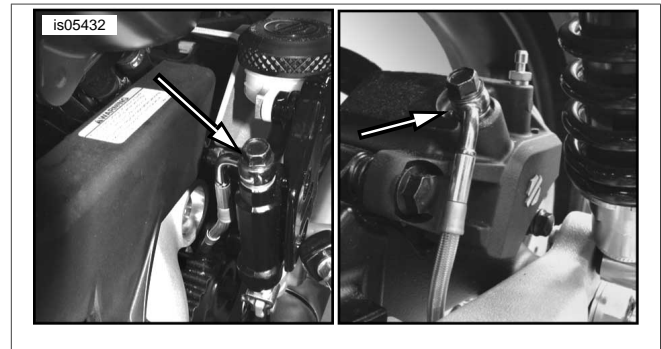


Figure 3. Master Cylinder and Caliper Housing Positive Stops

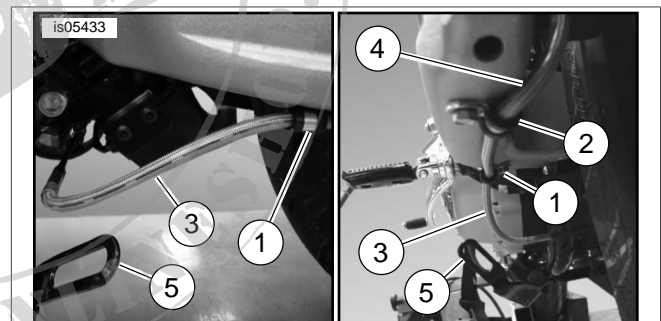
16. Tighten the caliper and master cylinder banjo bolts to 20-25 ft-lbs (27.1-33.9 Nm).

NOTE

See Figure 4. It is important to install the brake line to the rear fork using the two **new** cushioned P-clamps from the kit, not the larger original clamps, and to install them in the orientation shown.

Position the clamps on the line to achieve the following:

- The loop of brake line (4) going up to the caliper must not be pulled too tight.
- There should be no excess brake line hanging down from under the rear fork.
- The loop of brake line (3) forward of the rear fork must not be too tightly pulled, or left too large. Too large a loop may catch the rider's heel while riding or upon jiffy stand (5) deployment.



1. Forward P-clamp faces outward
2. Rearward P-clamp faces inward
3. Forward loop of brake line
4. Loop of brake line up to caliper
5. Jiffy stand

Figure 4. Braided Rear Brake Line Routing

17. Open up the two cushioned P-clamps (1 and 2) and wrap them around the braided brake line in the orientation shown in Figure 4 and Figure 6.

Install the two cushioned P-clamps to the underside of the rear fork using the hex head screws with washers (H) saved earlier. Tighten the screws to 80-100 **in-lbs** (9.0-11.3 Nm)

18. Review the routing of the brake line from the master cylinder to the manifold, and from the manifold to the caliper.
 - a. Be sure the brake line is not twisted.
 - b. Ensure that the routing of the brake line is smooth and does not interfere with any vehicle components. If necessary, adjust the position of the P-clamps.

NOTE

To prevent interference with the switch terminal isolator wall (between the terminals), align the female wiring harness connectors with the brake light switch terminals (2) so the flat side of the metal receptacle inside the connector housing faces the isolator wall (1).

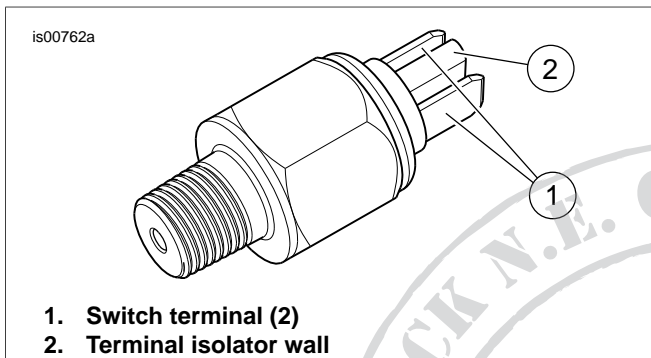


Figure 5. Rear Stop Lamp Switch

19. Connect the wiring harness connectors [121] unplugged earlier onto the brake light switch spade terminals.
20. **Models EXCEPT California:** If the vehicle is equipped with the optional security system, refer to the service manual. While the system is disarmed, reattach the siren harness connector and install the security siren, bracket and cover assembly to the vehicle.
California models: Install the charcoal canister to the vehicle. Refer to the service manual.

FINAL ASSEMBLY

Bleed and Test Braided Brake Line

Bleed the brake fluid from the rear brake reservoir and line per the instructions in the service manual, except as noted.

1. Install one end of a length of 5/16 inch (7.9 mm) ID clear plastic tubing over the caliper bleeder valve, and place the free end in a suitable container.
Verify that the caliper bleeder valve is closed tightly.
2. Stand the motorcycle upright so that the master cylinder is level. Unscrew and remove the rear master cylinder cap.

NOTE

The brake system on this vehicle uses DOT 4 BRAKE FLUID. Do not mix grades of brake fluid as they are not compatible. Mixing different types of fluid may adversely affect braking ability and lead to brake failure which could result in death or serious injury.

CAUTION

Direct contact of D.O.T. 4 brake fluid with eyes can cause irritation. Avoid eye contact. In case of eye contact flush with large amounts of water and get medical attention. Swallowing large amounts of D.O.T. 4 brake fluid can cause digestive discomfort. If swallowed, obtain medical attention. Use in well ventilated area. KEEP OUT OF REACH OF CHILDREN. (00240a)

NOTE

Immediately wipe up any brake fluid spillage with a clean, **dry**, soft cloth. Follow up by thoroughly wiping the affected area with a clean, **damp**, soft cloth (small spills) or washing with a large quantity of soapy water (large spills).

Cover nearby motorcycle surfaces with an H-D Service Cover or polyethylene protective sheet to help protect against damage to the finish caused by spillage or splash of DOT 4 brake fluid.

3. Add DOT 4 HYDRAULIC BRAKE FLUID to the master cylinder reservoir per the instructions in the service manual. Do not reuse old brake fluid. Use only DOT 4 fluid from a sealed container.

WARNING

Be sure the master cylinder relief port is not plugged. A plugged relief port can cause brake drag or lockup and loss of vehicle control, which could result in death or serious injury. (00317a)

4. Verify proper operation of the master cylinder relief port. Actuate the rear brake foot pedal. A slight spurt of fluid will break the fluid surface in the reservoir compartment if all internal components are working properly.
5. Pump the brake pedal to build up hydraulic pressure.
6. **While holding the pedal**, open the caliper bleeder valve about 1/2-turn. Brake fluid (and possibly air bubbles) will flow from the bleeder valve through the tubing. Close the bleeder valve as soon as a loss of pressure is detected. Allow the brake pedal to return slowly to its released position.

NOTE

Pay careful attention to the fluid level in the master cylinder reservoir during the bleeding procedure. To avoid drawing air into the brake lines, always add fluid as needed to the reservoir before it becomes completely empty.

7. Repeat steps 5 and 6 until all air bubbles are purged, and a solid column of fluid is observed in the bleeder tube.
8. Final tighten the bleeder valve to 35-61 **in-lbs** (4.0-6.9 Nm), and install the bleeder cap.
9. Add brake fluid as needed to the master cylinder reservoir until the fluid reaches the UPPER level mark.

NOTE

Before installing the master cylinder cap, verify that the cover gasket bellows is not expanded. If the bellows is expanded, brake fluid will be ejected from the reservoir during cover installation, which could damage the vehicle finish.

10. Install the cap (with gasket compressed) onto the master cylinder reservoir.

Return to Service

11. Verify that the ignition/key switch is turned to the OFF position.
12. Refer to the service manual and follow the instructions given to install the main fuse.
13. Turn the ignition/key switch to IGNITION, but do not start the motorcycle. Actuate the rear brake foot pedal to verify operation of the brake lamp.

⚠ WARNING

After repairing the brake system, test brakes at low speed. If brakes are not operating properly, testing at high speeds can cause loss of control, which could result in death or serious injury. (00289a)

14. Test ride the motorcycle. If the brake feels spongy, repeat the bleeding procedure.

SERVICE PARTS

Table 1. Service Parts

Item	Description (Quantity)	Part Number
1	Brake line assembly, rear, XR 1200, braided stainless steel	Not sold separately
2	P-clamp, cushioned (2)	Not sold separately
3	Sealing washer, 10 mm (4)	41732-04
Items mentioned in text, but not included in kit.		
A	Brake line bracket	
B	Original equipment (OE) stop lamp switch	
C	OE P-clamp	
D	OE split grommet	
E	OE machine screw	
F	OE banjo bolt (2)	
G	OE T-40 TORX screw (2)	
H	OE hex head screw with washer (2)	
I	Front of vehicle	

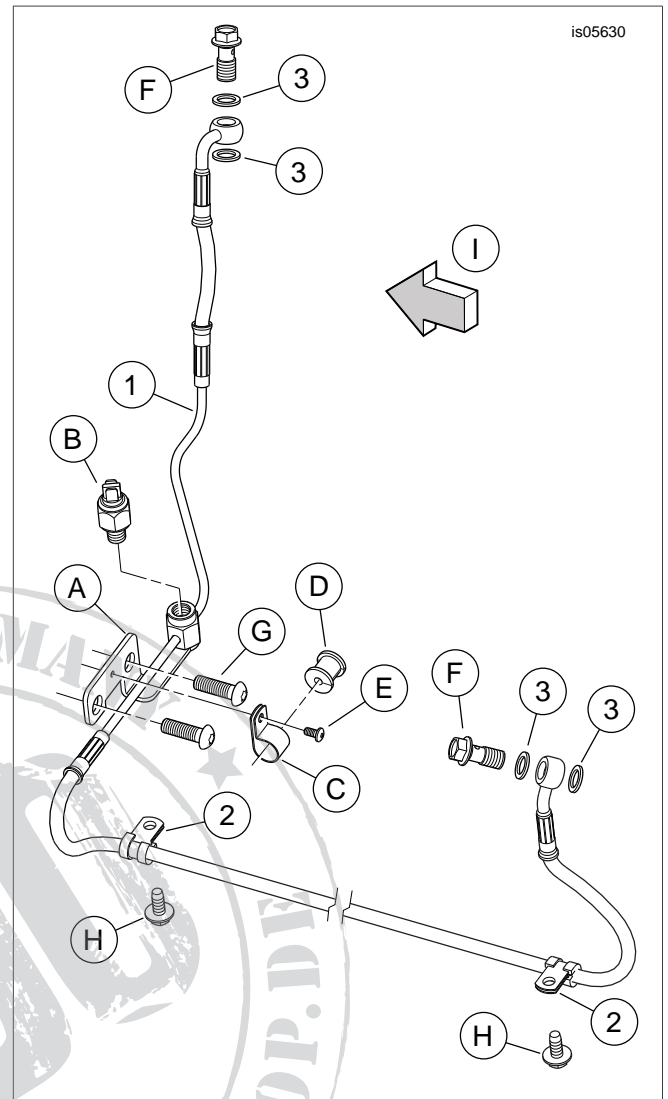


Figure 6. Service Parts, XR1200 Braided Rear Brake Line Kit